

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A device ~~Device~~ for increasing a ~~the~~ perceived bandwidth in an audio signal path with limited bandwidth, comprising:  
 an input terminal (1) for connecting an audio signal;  
 an output terminal (2) for connecting a speaker unit for generating an acoustic signal;  
 a splitter (3) adapted to divide the audio signal path from the input terminal (1) into two branches, the branches comprising:

a first branch (4) for passing a first part of the audio signal; ~~and~~  
 a second branch (5) for processing a second part of the audio signal; and,  
wherein the second branch comprises ~~comprising~~ means (7, 8, 9) for producing harmonics of the audio signal; and  
 a combiner (6) for adding the harmonics produced in the second branch (5) to the first part of the audio signal in the first branch (4) at the output terminal; and (2), ~~characterised in that the~~ wherein the means for producing harmonics comprises a harmonic generator (8) for producing out-of-band harmonics.

2. (Currently Amended) The device ~~Device~~ according to claim 1, ~~characterised in that wherein~~ the means for producing harmonics further comprises a filter (7), and an adjustable amplifier (9).

3. (Currently Amended) The device ~~Device~~ according to claim 2, ~~characterised in that wherein~~ the filter (7) is arranged to separate ~~the an~~ upper portion of ~~the a~~ pass band as an input to the harmonic generator (8).

4. (Currently Amended) The device ~~Device~~ according to claim 1, 2 ~~or~~ 3, ~~characterised in that wherein~~ the harmonic generator (8) comprises a nonlinear circuit.

5. (Currently Amended) The device ~~Device~~ according to claim 1, 2 ~~or~~ 3, ~~characterised in that wherein~~ the harmonic generator (8) comprises a digital signal processor; (DSP).

6. (Currently Amended) The device ~~Device~~ according to claim ~~any one of claims 1 to 5, characterised in that wherein~~ the means for producing harmonics is arranged to add second harmonics.

7. (Currently Amended) The device ~~Device~~ according to claim ~~any one of claims 1 to 5, characterised in that wherein~~ the means for producing harmonics is arranged to add even harmonics.

8. (Currently Amended) The device ~~Device~~ according to claim ~~any one of claims 1 to 7, characterised in that wherein~~ the audio signal is a ring signal.

9. (Currently Amended) The device ~~Device~~ according to claim 8, ~~characterised in that wherein~~ the audio signal is a polyphonic ring signal.

10. (Currently Amended) The device according to claim 1, wherein Device according to any one of claims 1 to 7, characterised in that the audio signal is a speech signal, such as GSM or Bluetooth audio.

11. (Currently Amended) The device according to claim 1, wherein Device according to any one of claims 1 to 10, characterised in that the first branch comprises (4) is provided with means (10) for providing a delay or a phase shift.

12. (Currently Amended) The device according to claim 1, the device being used in a communication Communication apparatus, characterised by including a device for increasing the perceived bandwidth according to any one of claims 1 to 8, 10 and 11.

13. (Currently Amended) The device according to claim 9, the device being used in a communication apparatus comprising: Communication apparatus, characterised by including a device for increasing the perceived bandwidth according to claim 9, comprising a polyphonic sound effect generator for producing the polyphonic ring signal.

14. (Currently Amended) The device according to claim 13, the device being used in a communication apparatus Communication apparatus according to claims 12 or 13, characterised in that wherein the communication apparatus is a portable telephone, a pager, a communicator or an electronic organizer organiser.